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COMMITTEE OF EXPERTS ON THE TRANSPORT OF DANGEROUS GOODS

REPORT OF THE COMMITTEE OF EXPERTS ON ITS TENTH SESSION

(4 - 13 December 1978)

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Note: Except annex 12 all other annexes will be circulated as addenda to this report as follows:

annexes 1, 3, 4, 5, 6, 7, 8 and 10	=	ST/SG/AC.10/4/Add.1
annex 2	=	ST/SG/AC.10/4/Add.2
annex 9	=	ST/SG/AC.10/4/Add.3
annex 11	=	ST/SG/AC.10/4/Add.4

REPORT

1. The Committee of Experts on the Transport of Dangerous Goods held its tenth session from 4 December to 13 December 1978. The session was attended by experts appointed by the following countries: Canada; France; Germany, Federal Republic of; Iraq; Italy; Japan; Norway; Poland; Thailand; Union of Soviet Socialist Republics; United Kingdom; United States of America. The following organizations were represented by observers, who took part in the work of the Committee in an advisory capacity: United Nations Environment Programme (UNEP); World Health Organization (WHO); International Civil Aviation Organization (ICAO); Universal Postal Union (UPU); Inter-Governmental Maritime Consultative Organization (IMCO); International Atomic Energy Agency (IAEA); Central Office for International Railway Transport (OCTI); International Chamber of Commerce (ICC); International Organization for Standardization (ISO); International Air Transport Association (IATA); International Road Transport Union (IRU); International Union for Inland Navigation (UINF). In addition, representatives of the European Council of Chemical Manufacturers' Federations (CEFIC), the European Syndicate on Steel Drums (SNFA), the International Committee of Steel Drum Reconditioners (SIRRMED), Commission permanente européenne des gaz industriels et du carbure de calcium (CPI), and the Hazardous Materials Advisory Committee (HMAC) were consulted when items of direct concern to their organization were under consideration.

2. Experts from Chile, the Netherlands and Peru were invited by the Committee to take part in the work of the session under Rule 72 of the Rules of Procedure of the Economic and Social Council.

3. The Committee considered the application from the Hazardous Materials Advisory Committee (HMAC) for authorization to participate in the Committee's work. The Committee decided to allow the HMAC to participate in such part of the Committee's work as directly concerned it. It was noted that the HMAC represented expertise in most areas of concern to the Committee.

ADOPTION OF AGENDA

4. The Committee adopted the provisional agenda prepared by the secretariat (ST/SG/AC.10/R.4 and Corr.1) and agreed on the order of discussions of the various items on the basis of proposals by the expert from the United Kingdom (ST/SG/AC.10/R.20) subject to some changes.

ELECTION OF CHAIRMAN

5. On the proposal of the expert from the Federal Republic of Germany, supported by the experts from the Union of Soviet Socialist Republics and the United States of America, Mr. E.G. Whitbread (United Kingdom) was unanimously elected Chairman.

RESOLUTION 2050 (LXII) ADOPTED BY THE ECONOMIC AND SOCIAL COUNCIL

Publication of the Recommendations

6. The Committee took note of this Resolution and stressed the importance of the United Nations Recommendations being kept up to date in a printed version.

7. The Committee adopted a number of changes which may have an effect on the Format of the printed version of the Recommendations.

8. It was left to the Secretariat to find a proper and economical way of publishing a revised edition containing all the amendments.

International Convention on the transport of dangerous goods by all modes of transport

9. The Committee noted that the Economic and Social Council, at its sixty-second session, had invited the Committee to continue its studies of an international convention on the transport of dangerous goods by all modes of transport and had provided for convening additional meetings in 1979 (Resolution 2050 (LXII) of the Economic and Social Council).

10. With regard to the above-mentioned Convention, the experts from many countries pointed out that the study of such a Convention was highly desirable, but considered it premature to reach conclusions with regard to the Convention itself at the present session.

11. The representative of OCTI reminded the Committee that in 1975, in response to a request from the Executive Secretary of the Economic Commission for Europe, his organization had, through its permanent secretariat, made the following comments on the Economic and Social Council resolution concerning an international convention on the transport of dangerous goods by all modes of transport:

> Such a convention would probably be useful to shippers, but they would have to conform to the requirements for each mode of transport; the need for such a convention was less pronounced in Europe, where extremely comprehensive sets of regulations such as RID and ADR were available, than in other regions.

12. The representative of OCTI further stated that the task of preparing such a convention would necessarily have to be entrusted to a body whose work would, at least to some extent, overlap work in progress in connexion with RID and ADR, which could therefore be expected to be slowed down. It would also impose an additional financial burden on States. Since the convention would contain only requirements common to all modes of transport, it would have to be supplemented by specific rules for each mode; ratification was likely to take a long time.

13. In conclusion, the representative of OCTI stressed the need to decide immediately on the specific topics to be considered, in that context, at the February session of the Group of Rapporteurs, so as to facilitate intergovernmental organizations' decisions on the membership of their delegations.

14. Amongst special items the Committee discussed first of all the question whether the new Convention should include or should complement the existing Conventions such as the Chicago Convention for Air Transport, SOLAS 1960 for Sea Transport, and ADR and RID for road and rail respectively.

15. Another important problem was the question whether technical provisions covered in a convention should be mandatory or not.

16. After a lengthy discussion the Committee agreed to use the first week of the Spring session of next year to study this item. It was agreed that, according to Resolution 2050, the participation in the discussion of this question would be limited to governmental delegations and representation of specialized agencies and intergovernmental bodies concerned.

17. The Committee decided that the documentation already issued on the subject be used as a basis for the work of the Group of Rapporteurs (see documents E/CN.2/CONF.5/R.434, -/R.439, -/R.497, -/R.531 and -/R.590), supplemented by any additional papers which may have been submitted in good time.

18. The Committee agreed that the Group of Rapporteurs in discussing this question should in particular deal with the following aspects:

(a) The need for a Convention;

(b) The scope and structure of a convention, in particular the areas to be covered in the convention itself and its annexes;

(c) The body(s) to be entrusted with the task of drafting the text of a convention;

(d) The terms of reference for such body(s);

(e) Provision of resources required for undertaking the work involved.

19. It was also suggested that, in view of the nature of the work to be undertaken, which at this stage will not include a detailed discussion of any technical annexes, Governments give due weight to having members in their delegation with experience in preparing multilateral agreements.

20. The expert of Canada urged that delegations should as far as possible include representations of the different modes of transport.

ACTIVITIES OF INTERNATIONAL ORGANIZATIONS CONCERNED WITH THE DRAFTING OF REGULATIONS OR RECOMMENDATIONS ON THE TRANSPORT OF DANGEROUS GOODS AT AN INTERNATIONAL LEVEL

21. The Committee was informed by the representative of OCTI that the new International Regulations concerning the carriage of dangerous goods by rail (RID) - issued in loose-leaf form - entered into force on 1 July 1977. Inter alia, it will include amendments to the numbering of classes and marginals in accordance with the United Nations Recommendations. For the future the RID will also include the test requirements indicated in the United Nations Recommendations for packagings.

22. The representative of ICAO informed the Committee that the Dangerous Goods Panel established two years ago had completed its work and that a draft annex to the Chicago Convention, based on the United Nations recommendations and on the work of the International Atomic Energy Agency (IAEA), had been sent to Governments for comments. It was hoped that the new annex would be effective by June 1980 with an applicability date of 30 June 1981.

23. Upon request by the representative of UPU, the secretariat circulated a memorandum on the shipment of dangerous items by mail.

24. The expert from Canada advised the Committee that he understood that IAEA was expecting the Committee to provide entries for radioactive materials and that he would be proposing a number of entries to be included in the list.

25. Based in particular on comments submitted by the experts from the United States of America and Canada, the Committee had an exchange of views on the possibility of shipping dangerous goods by air-mail. In this context the question of consumer goods played an important role.

26. The Committee, noting the statements by the representatives of ICAO, IMCO and UPU that these Organizations would continue to base their work on the Committee's recommendations, was of the opinion that this would positively influence the harmonization of provisions with regard to the safe transport of dangerous goods.

ORGANIC PEROXIDES

27. The Committee had before it documents ST/SG/AC.10/C.2/R.96, -/R.97, -/R.116, -/R.147 and a note submitted by the expert from the Netherlands.

28. The Committee was informed of the work of the small group on organic peroxides and adopted amendments (see annex 2) to, in particular, it approved the proposal to add two new columns in chapter 2 of the Recommendations.

29. The Committee noted that for United Nations Number 2892 - Dimyristyl peroxydicarbonate, maximum 22 per cent, stable dispersion in water, the group had to allocate three different controls and one emergency temperature according to the packaging used in each case.

30. Furthermore, it was decided to change in all cases the expression "transport temperature" into "control temperature", and the secretariat was requested to keep in mind the use of a standard phraseology.

31. Finally, the Committee adopted the proposed inclusions and amendments which appear in annex 10 to this report.

LISTING AND CLASSIFICATION OF SUBSTANCES AND ARTICLES

(a) Study of the sections of the reports of the Group of Experts on Explosives (seventeenth and eighteenth sessions) dealing with the listing and classification of dangerous goods

32. The Chairman of the Group of Experts on Explosives reviewed the work accomplished during the Group's seventeenth and eighteenth sessions.

33. The Committee adopted the inclusion of new items and amendments to chapter 2 of the Recommendations.

34. It also decided to discuss further the proposals for amendments of chapter 4 (ST/SG/AC.10/C.1/R.8/Rev.1) submitted by the expert from the United Kingdom at the next session of the Group of Experts on Explosives.

35. In conclusion the Committee adopted in their entirety the proposals made by the Group of Experts on Explosives with regard to classification and the description of particular substances and articles and certain other amendments (see annexes 4 and 9 to the present report).

(b) Study of the sections of the reports of the Group of Rapporteurs (twentieth, twenty-first and twenty-second sessions) dealing with listing and classification of Dangerous Goods

36. The Committee set up a working group to study those parts of the reports (ST/SG/AC.10/C.2/1, -/C.2/2 and -/C.2/3) dealing with listing and classification.

37. The expert from the United Kingdom explained the need of a guideline for further amendment of new items to chapter 2. Unless the Committee agreed on certain restrictions the number of entries would in a short time be in the region of 10,000 to 15,000. After a long discussion it was finally agreed that the future work should take into account the following two statements. A substance or article to be included in the list should be:

(a) really dangerous, and

(b) shipped world-wide in large quantities.

38. The Committee agreed that further study would be needed with regard to the possibility of grouping or of assimilation. However, it instructed the small group to use these principles as a guideline for its work.

39. The expert from France made a reservation concerning the restriction of entries in the United Nations Recommendations as proposed by the expert from the United Kingdom. He pointed out that many countries, in particular those which ratified RID and ADR, have adopted the United Nations serial number for identification of tank wagons and tank-container carrying dangerous goods. The United Kingdom proposal would create a difficult situation in so far as new numbers have to be allocated to such substances which are not listed by the United Nations experts.

Other classes

40. The expert from Canada who chaired the small working group on listing and classification informed the Committee on the work done by the small group: document ST/SG/AC.10/R.17 and ST/SG/AC.10/C.2/R.126 were not adopted by the small group whereas it suggested that documents ST/SG/AC.10/C.2/R.114, -/R.132 and -/R.136 be discussed by the Group of Rapporteurs at a future session.

41. She further stated that the small group studied the listing of new items and amendments to chapter 2, a note submitted on fish meal as well as a note submitted on infectious substances. The Committee was informed that further discussions will be required on the definition for inflammable liquids and nitric acids. It was suggested to include in future information on details with regard to the amount of production quantities for chemicals and to delete special provisions 108 and 116.

42. After having noted the discussion which took place in the above-mentioned small working group on the fish meal entries, the Committee agreed to maintain only two simplified entries, numbers 1374 and 2216: United Nations number 2216 stands for stabilised fish meal which, because it no longer presents the risk of spontaneous combustibility, has been placed in Class 9. The Committee invited IMCO to consider the continued need for this entry.

43. Finally the Committee approved the work of the small group; the additions, deletions or amendments to chapter 2 are shown in annex 2 to this report.

44. The Committee later discussed the implications of the work of the small group with regard to the provisions for tank-containers. It was agreed that in all cases where packing ground have been changed, changes should be added to the table for tank-containers (see annex 11).

45. The Committee also adopted a proposal by the expert from the Federal Republic of Germany to add Isosorbite-dinitrate with at least 60 per cent phlegmatizer to class 4.1, group II (see annex 2).

46. A proposal by the expert from the United States of America as shown in document ST/SG/AC.10/C.2/R.150 relating to some n.o.s. entries was adopted (see annex 2). The secretariat was instructed to reflect all changes on substances accordingly in the tables of chapter 12.

47. The Committee adopted in their entirety the proposals made by the Group of Rapporteurs with regard to classification and listing.

Environmentally hazardous materials

48. The Committee noted with interest a proposal submitted by the rapporteur from Canada (ST/SG/AC.10/C.2/R.80). In the course of the discussion work done by the Joint IMCO/FAO/UNESCO/WMO Group of Experts on the Scientific Aspects of Marine Pollution (GESAMP) and the Organisation for Economic Co-operation and Development (OECD) was also considered. The representative of IMCO explained the state of the Marine Pollution Convention and its annex for packaged goods.

49. At the end of the discussion it was established that four countries were in favour of the proposal, four countries against, which meant that the proposal was not adopted.

50. The experts from the United States of America and the Union of Soviet Socialist Republics strongly expressed the view that, as a minimum, the substances submitted by the rapporteur from Canada should be listed and assigned serial numbers.

51. The expert from the United Kingdom doubted the wisdom of dealing with substances which, when split, were merely hazardous to the environment (such as milk) but were not dangerous goods, in the recommendations for the transport of dangerous goods.

52. The expert from the Federal Republic of Germany was of the opinion that, for the time being, no need had been shown to establish a new class or division for such materials in the Recommendations.

53. Finally, while there was a general feeling in favour of recognizing such materials, there was no agreement upon the criteria to be used nor upon the method of listing them. However, it was felt that, first, the possibility of including such items in the present classes had to be considered. The Committee agreed to refer the whole subject to a future session of the Group of Rapporteurs.

Proposals concerning various classes

54. The expert from Canada elaborated on the need that radioactive substances should be included in the United Nations Recommendations and should have a serial number. The Committee agreed in principle and allocated 12 new numbers in sequence to radioactive substances. A footnote should indicate that these entries relate to the Regulations of the International Atomic Energy Agency (IAEA). The secretariat was instructed to inform IAEA about this decision and to amend chapter 7 of the Recommendations accordingly.

55. A proposal by the expert from Canada (ST/SG/AC.10/C.2/R.106) to subdivide Class 8 and to develop a number of new labels for this subdivision, was not approved by the Committee which referred it back to the Group of Rapporteurs. The Committee also agreed to refer documents ST/SG/AC.10/R.14, and ST/SG/AC.10/C.2/R.131 to the Group of Rapporteurs for consideration.

56. The expert from Canada explained a proposal (ST/SG/AC.10/C.2/R.85) to subdivide gases of Class 2 according to additional properties such as inflammability, toxicity, etc. The proposal had a large amount of support and the Committee decided to refer this matter to the Group of Rapporteurs.

PACKING OF DANGEROUS GOODS

(a) Study of the sections of the reports of the Group of Experts on Explosives (seventeenth and eighteenth sessions) dealing with packing questions

57. The packing questions dealt with by the Group of Experts on Explosives were the subject of the second part of the statement by its Chairman.

58. In connexion with the consideration of document ST/SG/AC.10/R.30 introduced by the expert from the Union of Soviet Socialist Republics, the Committee, subject to certain amendments, also adopted this part of the work of the Group of Experts on Explosives.

59. The new text is attached as annex 9 to this report.

60. The Committee also considered annex 5 of the report of the Group on its eighteenth session - Procedures for determining the assignment of substances and articles to class 1 and among the divisions of that class, with particular reference to division 1.5 - (ST/SG/AC.10/C.1/2) referred to it for comment by the Group of Experts on Explosives. The Committee agreed that the Group of Experts should use this document as a basis for further development, subject to two amendments. The amended text appears in annex 9 to this report.

(b) Study of the sections of the reports of the Group of Rapporteurs on its twentieth, twenty-first and twenty-second sessions dealing with packing questions

61. Following a proposal submitted by the expert from Italy (ST/SG/AC.10/R.13) the Group adopted some changes relating to the stacking test in chapter 9. The amendments as adopted are shown in annex 8 to this report. The Committee also agreed to include steel drums of type 1A1A in paragraph 9.42 (ST/SG/AC.10/C.2/R.142).

62. As a result of information given by the representative of SERRED, the Committee agreed to reverse in paragraph 9.34.2 the letters g and h in order that also for reconditioned drums the marking will start with the sign of the country (see annex 8).

Multimodal tank-containers

63. The Committee reviewed the revision of document ST/SG/AC.10/C.2/R.60 prepared by the expert from Canada; it decided that all recommendations relating to Class 2 should be referred back to the Group of Rapporteurs for further work and remitted documents ST/SG/AC.10/C.2/R.60/Rev.1, -/R.60/Rev.1/Add.1, -/R.60/Rev.1/Add.2/Rev.1, ST/SG/AC.10/R.32, -/R.33, ST/SG/AC.10/C.2/R.78, -/R.137, -/R.141 and -/R.148 to a working group. The working group's study was also assisted by informal papers provided by the experts from the Federal Republic of Germany, the United States of America and the Union of Soviet Socialist Republics.

64. After considering the report of this working group the Committee adopted, with some changes in the text, the provisions of documents ST/SG/AC.10/C.2/R.60/Rev.1 the footnotes of ST/SG/AC.10/C.2/R.60/Rev.1/Add.1/Rev.1 and the provisions of ST/SG/AC.10/C.2/R.60/Rev.1/Add.2/Rev.1, (see annex 11 to this report) which will replace the whole present chapter 12 of ST/SG/AC.10/1/Rev.1.

Unit loads

65. The Committee decided, due to lack of papers, to discontinue the work on this item.

Gas cylinders

66. The Committee took note of the work which had been done by the small group which had met in London in February 1978.

67. So far the experts had not been able to agree on the methods to be adopted because of fundamental differences of opinion.

68. The Committee took note of the position and agreed that the work should be continued. The Committee also endorsed the instructions given to the Group by the Group of Rapporteurs (ST/SG/AC.10/C.2/3, annex 6) and added that ISO document TC 58 should also be taken into account. In order to study the proposals prepared by ISO TC 58 which were circulated during the meeting, it was agreed to have a further informal meeting of the small group in spring of 1979.

69. The expert from the United States of America offered to act as a host country for such a meeting and will arrange details with such experts who wish to participate. He said that the meeting was not scheduled to take place before April. The Committee agreed that the work should be based on the instructions as laid down in annex 6 of document ST/SG/AC.10/C.2/3.

70. Recalling the decision of the Group of Rapporteurs not to adopt specified minimum thickness requirements for metal receptacles, the expert of the United States of America reminded the Committee that the matter had not been settled once and for all (see paragraph 84 of ST/SG/AC.10/C.2/2). It was his view that further proposals should be solicited for consideration.

Reference temperatures for the filling of receptacles

71. The Committee took note of the work done during the past two years.

72. The expert from France informed the Committee that a group of manufacturers of his country had the intention to conduct tests which will simulate severest environmental conditions with regard to temperature and humidity. The tests will be run parallel with and without sun-shields. He suggested that the results of this work be submitted to the Committee in due time.

73. The expert from the United States of America pointed out that the Committee had decided some years ago to have a temperature of 55°C as the reference for filling receptacles. He felt that without experimental proof the Committee should not make any changes concerning receptacles.

74. The Committee agreed in principle to add a table to chapter 5 amending the grouping of inflammable liquids into three packaging groups. It adopted a table as shown in annex 5. The proposal by the expert from France to change the flashpoint limit from 23°C to 21°C was not supported.

Inhalation toxicity

75. The Committee had before it documents ST/SG/AC.10/C.2/R.77 and -/R.131 and ST/SG/AC.10/R.3, -/R.6, -/R.12, -/R.16, -/R.19 and -/R.29 and noted the position of the Group of Rapporteurs which had again changed its decision on this item.

76. After a lengthy discussion the Committee agreed that all three methods for the grouping of volatile toxic liquids should be recommended. The three methods under discussion are:

(a) Toxic Point Method

(b) Vapour Pressure Method

(c) Boiling Point Method.

77. The expert from the United Kingdom explained his preference for the method based on vapour pressure to be selected.

78. The expert from the Union of Soviet Socialist Republics felt, however, that the toxic point method has certain advantages.

79. After discussion the Committee adopted by a majority vote paragraphs 1, 2 and 3 of document ST/SG/AC.10/R.29 as amended and including a nomograph (see annex 6). The expert from the Federal Republic of Germany entered a reservation on the action taken by the Committee.

80. The Committee also requested the Group of Rapporteurs to work out a definition for volatile toxic substances.

Pesticides

81. The representative of CEFIC introduced documents ST/SG/AC.10/C.2/R.79 and ST/SG/AC.10/R.22 on the classification and listing of pesticides.

82. The Committee adopted paragraph 4 of document ST/SG/AC.10/R.22 as amended previously for inclusion in chapter 6 of the Recommendations.

83. The representative of CEFIC introduced documents ST/SG/AC.10/C.2/R.79 and ST/SG/AC.10/R.22 on the changes to be made based on the new criteria proposed by the World Health Organization: due to the fact that industry develops new pesticides every year, CEFIC suggests a set of rules.

84. After a discussion in which the experts from some countries mentioned certain amendments, a proposal was adopted by the Committee and will be included in section 6 (see annex 6).

Other classes

85. Concerning chapter 5, the Committee amended paragraph 5.3 and adopted a new table for packing groups according to flashpoint (see annex 5); it also agreed to change the limit from 32 to 23°C.

86. As a result of information given by the representative of SERRED, the Committee agreed to reverse in paragraph 9.34.2, g and h in order that also for reconditioned drums the marking will start with the sign of the country (see annex 8).

SHIPPING PROCEDURES AND HAZARD INFORMATION SYSTEM (HIS)

87. The Committee discussed the reformulation of chapter 13 of the Recommendations and agreed that in particular, for reasons of safety, packages containing dangerous goods should be marked with the correct technical name of the contents and with the appropriate United Nations serial number.

88. Some experts were of the opinion that this aspect could also be achieved by the use of labels which show as a pictogramme the main danger of the chemicals shipped.

89. The expert from the United States of America outlined the work developed by a small group at the twenty-second session of the Group of Rapporteurs (ST/SG/AC.10/C.2/R.129) and stressed the fact that safety as well as facilitation of commerce required an urgent revision of the present chapter 13 of the Recommendations.

90. Experts from various countries expressed sympathy with these proposals, however, some pointed out the difficulties which would be encountered by such countries which are Parties to existing conventions, in particular the International Convention concerning the Carriage of Goods by Rail (CIM) and the European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR).

91. The Chairman of the Group of Experts on Explosives said that, as mentioned in document ST/SG/AC.10/C.1/2, paragraphs 51, 52 and 60, the Group had decided that further discussion was needed on this draft before it could agree on the application of the principles therein to Class 1.

92. The expert from the United States of America expressed a reservation concerning the application of subsidiary inflammable risk labels for liquids having flashpoints of a Group III hazard level.

93. The expert from Norway supported the view expressed by some representatives of Intergovernmental Organizations that in particular in sea and air modes the use of the red label for inflammable substances was of the greatest importance.

94. The Committee finally agreed by a vote of 5 to 4 to delete the text of the present chapter 13 of the Recommendations and to replace it by the text shown in annex 12 to this report.

95. The Committee also considered and agreed on a revision of chapter 14 of ST/SG/AC.10/1/Rev.1 which would combine that chapter with chapter 13.

96. The expert from the Union of Soviet Socialist Republics proposed to insert two asterisks in column 6.1, line III, of table 1 to paragraph 13.7 (see ST/SG/AC.10/CRP.2/Add.1) and to insert a second note under the table as follows: "Only for sea transport". This proposal was not accepted by the Committee for the time being.

97. With regard to document ST/SG/AC.10/R.9, the Committee agreed to insert paragraphs 5 and 6 thereof in the new chapter 13 and to use the remainder of this document as an amendment to chapter 2 and the index regarding the capitalization of certain portions of entries, subject to any changes made during the session.

98. The representative of IRU stated that, in order to avoid confusion in international transport, the IRU recommends all countries using their national HIS system to pay great attention to the fact that the relative marking should in no case be confused with the United Nations serial numbers which can be found, according to paragraph 13.26, either on the placarding or on the rectangular orange panel.

99. The Committee took note of paragraphs 90-98 and annex 6 of ST/SG/AC.10/C.2/2 and paragraphs 97 and 98 of ST/SG/AC.10/C.2/3; and also considered ST/SG/AC.10/C.2/R.99 (United Kingdom) and ST/SG/AC.10/C.2/R.146 and -/R.146/Add.1 (IRU).

100. The expert from the United Kingdom presented document ST/SG/AC.10/C.2/R.99 and emphasized that the proposal was intended to introduce flexibility. There would only be two possibilities: a diamond label alone, or a diamond label and a rectangular plate. No country would be obliged to adopt the latter marking if they did not want to.

101. The expert from the United States of America stated that he would consider giving support to the inclusion of a single orange panel, 12 centimeters high and 30 centimeters wide, as an alternate location for the display of the United Nations serial number. This consideration was based on the adoption of a world-wide emergency response system utilizing the United Nations number and the fact that local or regional emergency codes would not be required in a manner that would impede or restrict the flow of commerce.

102. In this context, the representative of IRU, commenting on the note of his Organization (ST/SG/AC.10/C.2/R.146/Add.1) drew the Committee's attention in particular to the risks of confusion and danger which lack of harmonization, at a world level, of the hazard information systems could lead to and which would be a consequence of the method proposed by the Group of Rapporteurs (ST/SG/AC.10/C.2/2, annex 6), due to the fact that this method would allow the use of existing systems or the creation of new ones at national, regional or world levels. At any rate, he recommended that the system which would be adopted in the Recommendations should not lead to confusion in the utilization of the existing HIS in Europe (ADR/RID), in particular as far as the position of the United Nations serial number is concerned.

103. After general discussion of those points (those of the United Kingdom, United States of America, etc.) took place the expert from Canada proposed that the Committee consider four major points of principle:

- was the Committee prepared to recommend an abbreviated code?
- was the Committee prepared to consider an alternative area of display for the serial number?
- was the Committee prepared to recommend as a general rule, the non-display of subsidiary risk placards?
- was the Committee prepared to consider the HIS recommendations as fourth part (placarding) of the chapter on consignment procedures?

and that a small working group should be formed to draft the text of the new Recommendations according to the decisions taken.

The Committee decided upon those points almost unanimously in turn - no, yes, yes and yes.

104. A small group met and drafted the text which was adopted after some further discussion and is contained in annex 12 to this report. The Committee also agreed that Rapporteurs should be instructed to work in the future on two specific matters: the identification of those goods for which

- the serial number should always be displayed; and

- the subsidiary risks should be placarded.

105. The Committee also considered a revision of chapter 14 "Recommendations on the Hazard Information System (HIS) of the Recommendations".

106. Following the decision of the Committee to combine chapters 13 and 14 (see paragraph 104) the new text as amended is shown in annex 12 to this report.

107. The Committee considered a new proposal for a change of paragraph 13.24 of ST/SG/AC.10/CRP.2/Add.2, the text as amended by the Committee was adopted (see annex 12). The secretariat was instructed to include the correct dimensions as used at present in the orange book.

LABELLING

108. The Committee instructed the secretariat to implement in the Recommendations all changes with regard to labelling as adopted by IMDA.

109. No label was adopted for [illegible] substances since there were no entries to the list for such substances adopted at the session. Further consideration of the need for the "Weeping Eye" label will be given at future listing and classification sessions of the Group of Rapporteurs.

APPROVAL OF AND COMMENTS ON THE RESPECTIVE REPORTS OF THE GROUP OF EXPERTS ON EXPLOSIVES AND THE GROUP OF RAPPORTEURS

110. The Committee expressed its gratitude to the Group of Experts on Explosives and the Group of Rapporteurs for their contributions to the Committee's work. Subject to the decisions adopted during the session, it approved the reports of the Group of Experts on its seventeenth and eighteenth sessions (ST/SG/AC.10/C.1/1, and ST/SG/AC.10/C.1/2) and of the Group of Rapporteurs on its twentieth, twenty-first and twenty-second sessions (ST/SG/AC.10/C.2/1, ST/SG/AC.10/C.2/2 and ST/SG/AC.10/C.2/3).

FUTURE WORK AND CALENDAR OF MEETINGS

111. The Committee agreed to include in its future work programme, first of all, the items listed by the Expert on Explosives, and secondly, the items listed as follows and amended by the Committee:

1. Consideration of procedures

2. The establishment of criteria for all classes and divisions including a limitation of new entries

3. The development of a new United Nations numbering system

4. The development of a list of substances forbidden to all modes of transport

5. The development of recommendations for loading and unloading stations, including intermodal transfers

6. The development of recommendations for the training of personnel engaged in transport

7. Hazard Information Systems

8. The treatment of substances with explosives properties but appropriate to other classes

9. Desirability of a Convention

10. Tank-containers for gases and powdered solids

11. Establishment of criteria for Intermediate Bulk Containers (IBCs)

12. New class for environmentally hazardous materials

13. Gas cylinders

14. General matters on listing, packaging, performance tests, labelling

15. Limited quantity exemptions

16. Treatment of consumer products

17. New Glossary.

112. The Committee agreed that its next session should take place end 1980 and last about eight working days (1-10 December 1980).

113. The following calendar of meetings was proposed for the Group of Experts on Explosives and the Group of Rapporteurs, covering the period between the spring session of the Economic and Social Council in 1979 and 1981 */ as well as the biennium 1980-1981 for planning the Calendar of Conferences:

1979

5-16 February (Geneva)	Group of Rapporteurs of the Committee (twenty-third session) (already approved)
6-10 August (Geneva)	Group of Experts on Explosives (nineteenth session)
13-17 August (Geneva)	Group of Rapporteurs of the Committee (twenty-fourth session)

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*/ For the costs involved in running these sessions, see ST/SG/AC.10/CRP.4.

1980

11-22 February (Geneva)	Group of Rapporteurs of the Committee (10 working days) (twenty-fifth session)
4-8 August (Geneva)	Group of Experts on Explosives (5 working days) (twentieth session)
11-15 August (Geneva)	Group of Rapporteurs of the Committee (5 working days) (twenty-sixth session)
1-10 December	Eleventh session of the Committee of Experts.

1981

9-13 March (Geneva)	Group of Rapporteurs of the Committee (5 working days) (twenty-seventh session)
3-7 August (Geneva)	Group of Experts on Explosives (5 working days) (twenty-first session)
10-14 August (Geneva)	Group of Rapporteurs of the Committee (5 working days) (twenty-eighth session)

STRUCTURE AND FORMAT OF THE RECOMMENDATIONS

114. The Committee was of the opinion that all the changes in the Recommendations adopted at its present session should be easily available to all concerned. The Committee strongly favoured, therefore, issuing an updated revised edition of document ST/SG/AC.10/1/Rev.1, if possible in a loose-leaf form. If this were at present not possible, an addition to the current volume containing all changes should be issued. The Committee was informed by the secretariat that the financial implications of the publication of a new edition would amount to about US$ 43,000; amendments in the form of an addendum would amount to about US$ 16,000.

115. In order to include two new columns adopted for organic peroxides the list in chapter 2 may have to be arranged in a future edition in the same layout (format) as the tables in chapter 12.

ANY OTHER BUSINESS

Responsibility and procedures of the Committee

116. The expert from Canada introduced document ST/SG/AC.10/R.15 containing a number of proposals as to how to improve the work of the Committee. The Committee noted the proposals with interest and felt that, following an initial exchange of views, further study was required. It was felt that there would be definite advantages if the work could be allocated in such a way that the Group of Rapporteurs would take up at each session specific types of problems, requiring only the presence of experts in that particular field. It was felt that in this way, e.g. on the one hand questions involving chemical and physical properties of goods such as listing and classification could be treated, while on the other hand the questions of packaging and labelling, involving special technical expertise be considered. It was also suggested that the session of the Group of Rapporteurs preceding the Committee's session should be able to deal with all outstanding matters.

117. In this context many representatives stressed the importance of the work done in informal groups to prepare specific subjects for effective consideration by the Group of Rapporteurs. However, some reservations of a non-substantive nature were expressed with regard to such meetings.

International Symposium

118. The expert from Japan informed the Committee that the Sixth International Symposium on the Transport of Dangerous Goods by Sea and Inland Waterways, 1980, will be held in Tokyo, Japan, from 13 to 17 October 1980, under the auspices of the Japanese Ministry of Transport and Maritime Safety Agency.

119. The Committee noted this information with interest and will report it for the benefit of those organizations concerned in this work.

120. The expert from Canada informed the Committee that the Government of the Province of British Columbia and the Government of Canada has proposed that the Seventh International Symposium on the Transport of Dangerous Goods by Sea and Inland Waterways, 1982, be held in the city of Vancouver.

Table of Precedence

121. The expert from the United States of America introduced document ST/SG/AC.10/R.11 (amendments to the table of precedence of hazard characteristics in chapter 1) which is the outcome of a discussion during the last meeting of the IMCO Sub-Committee where all countries felt that in sea transport the danger of inflammability is predominant. However, the Committee agreed to adopt only paragraph 1 of this document:

> "(1) Class 3, Group I and II substances be accorded precedence over Class 6.1, Group I (Dermal) substances and keep the precedence of inhalation toxicity over inflammability."

Statement by France

122. The expert from France deplored the fact that, due to the large amount of papers it was necessary to set up a number of working groups. This would oblige Governments in future to bring more experts with them to the meetings.

ADOPTION OF THE REPORT

123. The Committee adopted the report on its tenth session, together with its annexes.

Annex 12

RECOMMENDATIONS ON CONSIGNMENT PROCEDURES
(ST/SG/AC.10/1/Rev.1 - Chapter 13)

Amendments adopted by the Committee

Replace present chapters 13 and 14 by the following:

"RECOMMENDATIONS ON CONSIGNMENT PROCEDURES

Preamble

13.1 Whenever dangerous goods are offered for transportation, certain measures should be taken to ensure that the potential risks of the dangerous goods offered are adequately communicated to all who may come in contact with the goods in the course of transportation. This has traditionally been accomplished through special marking and labelling of packages to indicate the hazards of the consignment, through the inclusion of relevant information on documents which accompany the shipment and by the placarding of the transport vehicle or container. This chapter sets forth the recommended procedures for dangerous goods shipments relative to marking, labelling, documentation by manual, electronic or other automatic means and placarding.

13.2 Unless otherwise provided in these recommendations, the proper shipping name for the dangerous good, as determined in accordance with the guidelines in appendix 1 to this chapter, and the corresponding United Nations serial number, should be displayed on each package. For goods of Class 1, the division and compatibility group should also be shown. A typical package marking could be:

Corrosive Liquids, n.o.s. (Caprylyl Chloride) UN 1760

13.3 Provisions concerning the marking of information relative to package performance standards on packagings is presented in paragraph 9.34.

LABELS IDENTIFYING RISKS

13.4 The labels recommended in paragraph 13.17 are mainly intended for affixing on goods or packages. The labelling system is based on the classification of dangerous goods and was established with the following aims in mind:

(a) To make dangerous goods easily recognizable from a distance by the general appearance (symbol, colour and shape) of the labels they bear;

(b) To make the nature of the risk easy to identify by means of symbols. The five main symbols: Bomb (Explosion), Flame (Fire), Skull and Crossbones (Poisons), Trefoil (Radio-activity), acids spilling from two glass vessels and attacking a hand and a metal (Corrosion), are supplemented by four others to indicate oxidizing substances (a flame over a circle), non-inflammable compressed gases (a gas cylinder), infectious substances (three crescents superimposed on a circle) and substances which should not be carried in the immediate vicinity of foodstuffs (St. Andrew's Cross over an ear of wheat); and,

(c) To provide, by means of colours on the labels, a useful first guide for handling and stowing.

In certain cases, where the danger of a substance is considered low, or the substance is packed in a limited quantity, exceptions from labelling may be provided.

13.5 In general not more than one danger label should be affixed to a package. However, since a substance or article may present more than one significant risk, e.g. fire and poisoning, the package should, in such cases, bear in addition to the label corresponding to the major risk, only such additional labels as indicate important subsidiary risks. Where substances or articles are specifically listed in chapter 2, the labels to be shown are indicated therein. In general, subsidiary risk labels need not be applied to packages to denote subsidiary risks of a Group III hazard level. In all instances in which subsidiary hazard labels are applied, the label identifying the primary hazards of the material should bear, in the lower corner of the label, the number of the class or division as appropriate, while labels identifying subsidiary risks should bear no class or division number.

13.6 Three separate labels have been provided for Class 2, one for non-inflammable gases (green), one for inflammable gases (red) and one for poison gases (white). When the list of dangerous goods shows no subsidiary risks for a substance of Class 2, the non-inflammable gas (green) label should be used. When the list indicates that a Class 2 substance possesses a 3 subsidiary risk, only the inflammable gas (red) label should be used. Similarly, when the list indicates that a Class 2 substance possesses a subsidiary 6.1 risk, only the poison gas (white) label should be used. For gases possessing both 6.1 and 3 subsidiary risks, both the poison gas (white) and the inflammable gas (red) labels should be applied to the package with only the poison gas (white) label bearing the class number in the lower corner.

13.7 In instances where a substance which meets the definition of more than one class is not specifically listed by name in chapter 2, subsidiary risk labels should be applied in accordance with the following table:

Table 1

SUBSIDIARY RISK CLASS							
Class or Division / Packing Group	3	4.1	4.2	4.3	5.1	6.1	8
I	X	X	X	X	X	X	X
II	X	X	X	X	X	X	X
III	*		X	X			*

X All modes * Not for road and rail

except that substances of Class 8 with a subsidiary risk of 6.1 need not show the subsidiary toxic risk label.

13.8 These recommendations relate essentially to danger labels. However, additional marks or symbols indicating precautions to be taken in handling or storing a package (e.g. a symbol representing an umbrella indicating that a package should be kept dry) may be displayed on a package if appropriate.

PARTICULARS OF LABELS

13.9 The recommended labels are all in the form of a square set at an angle of 45° (diamond-shaped) with minimum dimensions of 4" x 4" (10 cm by 10 cm), except in the case of packages of dimensions such that they can only bear smaller labels. They have a line of the same colour as the symbol, 1/5" (5 mm) inside the edge and running parallel to it. The labels are divided into two equal triangles, the upper being reserved for the symbol and the lower available for a text. A specimen of each label is given in 13.14.

13.10 The symbols should be shown in black on all labels except that the symbols on the green and red labels for Class 2, on the red label for Class 3, and on the blue label for Division 4.3 may be shown in white. All labels must be able to withstand open weather exposure without a substantial reduction in effectiveness.

13.11 For labels for Classes 1 (except Divisions 1.4 and 1.5) and 5, the number of the division in which the article or substance is listed should be shown in the bottom corner of the label. For all other labels, the class number should be shown in the bottom corner of the label. These numbers should be shown in the same colour as the symbol, with the exception of the Class 8 label on which the class number should be shown in white.

13.12 Blanks in the text appearing in the lower half of the labels for substances in Class 7 should be completed as necessary. On labels other than those for substances in Class 7, the insertion of some text (other than the class number) in the space below the symbol should be confined to particulars indicating the nature of the risk and precautions to be taken in handling. Such optional text should be shown in the same colour as the symbol, with the exception of the Class 8 label on which the text should be shown in white.

13.13 Labels should be placed on a background of contrasting colour.

13.14 SPECIMEN LABELS

(*PLACE FOR CLASS OR DIVISION NUMBER AS APPROPRIATE)

CLASS 1

Explosives

Symbol (exploding bomb): black; Background: orange

Division 1.4 (Except safety explosives) and Division 1.5

Background: orange; Figures: black; Numerals must be about 30 mm in height and be about 5 mm wide (for a label measuring 10 cm x 10 cm).

CLASS 2

Non-inflammable gases

Symbol (gas cylinder): black or white; Background: green

Inflammable gases
Symbol (flame): black or white
Background: red

Poison (toxic) gases
Symbol (skull and crossbones): black
Background: white

CLASS 3

Inflammable liquids

Symbol (flame); black or white; Background: red

CLASS 4 - Division 4.1

Inflammable solids
Symbol (flame): black;
Background: white with vertical red stripes

CLASS 4 - Division 4.2

Substances liable to spontaneous combustion
Symbol (flame): black;
Background: upper half white; lower half red

CLASS 4 - Division 4.3

Substances which, in contact with water, emit inflammable gases

Symbol (flame): Black or white; Background: blue

CLASS 5

Oxidizing substances; Organic peroxides

Symbol (flame over circle): black; Background: yellow

CLASS 6 - Division 6.1

Poisonous (toxic) substances;
Danger groups: I and II
Symbol (skull and crossbones): black; Background: white

CLASS 6 - Division 6.1

Danger group: III
The bottom part of the label should bear the inscriptions:
HARMFUL
Stow away from foodstuffs
Symbol (St. Andrew's Cross over an ear of wheat): black;
Background: white

CLASS 6 - Division 6.2

Danger infectious substances
The bottom part of the label should bear: Infectious Substance (Optional) and the Inscription: "In case of damage or leakage immediately notify Public Health authority" (optional); Symbol (three crescents superimposed on a circle) and Inscription: black; Background: white

CLASS 7

Radio-active substances

(a) Category "white"; Background: white and one vertical red stripe in the bottom half. Text (mandatory) black in bottom half of label: Principal radio-active content ... Activity of contents ... Curies ...

Symbol: trefoil, black

(b) Category "yellow"; Background: top half yellow, with two or three red stripes in the bottom half white. Text (mandatory) black in bottom half of label: Principal radio-active content ... Activity of contents ... Curies ... Transport index ...

CLASS 8

Corrosives

Symbol: (acids, spilling from two glass vessels and attacking a hand and a metal): black; Background: upper half white, lower half black with white border

DOCUMENTATION OF DANGEROUS GOODS SHIPMENTS

13.15 One of the primary requirements of a shipping document for dangerous goods is to convey fundamental information relative to the hazard of the goods being transported. To achieve this end, it is considered necessary to include certain basic information on a transport document for a(the) dangerous good(s) in a consignment unless otherwise excepted in the recommendations. It is recognized that individual national authorities or international organizations may consider it necessary to require additional information; however, the basic items of information considered necessary for each dangerous article or substance offered for transport by any mode are:

(a) The proper shipping name, as determined in accordance with the guidelines in appendix 1 to this chapter.

(b) The hazard class or, when assigned, the hazard division of the material. For substances or articles of Class 1, the division should be followed immediately by the compatibility group. For substances of Class 2 possessing subsidiary flammable or toxic properties, the hazard class should be further amplified by adding the word "inflammable" or "toxic" as appropriate.

(c) The United Nations serial number assigned to the material.

(d) The total quantity of dangerous goods covered by the description.

In addition, other elements of information deemed necessary by national authorities or international organizations may also be shown (e.g. flashpoint or flashpoint range).

13.16 The locations and order in which these elements of information appear on the shipping document is left discretionary, except that the proper shipping name, hazard class and United Nations number should appear in that sequence. An example of a dangerous goods description would be:

ALLYL ALCOHOL 3 UN 1098

13.17 It is not the intention of these recommendations to require a separate shipping document for shipments containing both dangerous and non-dangerous goods, or to restrict the number of individual dangerous goods descriptions that may appear on a single document. However, if both dangerous and non-dangerous goods are listed on one document, the dangerous goods should be listed first, or otherwise emphasized.

13.18 The dangerous goods documentation prepared by the shipper should in addition carry, or be accompanied by, a certificate or declaration that the shipment offered can be accepted for transport and that it is properly packed, marked and labelled, and in proper condition for transport in accordance with the operative regulations. The text of this declaration should be acceptable to all modes of transport, making a dangerous goods declaration issued for the initial mode of transport valid for subsequent modes in multimodal and combined transport. A suggested form for such a declaration is:

> I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked and labelled and are in all respects in proper condition for transport by (insert mode(s) of transport involved) according to applicable international and national governmental regulations.

13.19 The text of the above declaration, and the special information relative to the hazard of the goods transported (as indicated in paragraph 13.15) should be incorporated into, or combined with, an existing transport or cargo handling document. The layout of the information on the document (or the order of transmission of the corresponding data by electronic or other automatic means) should be as provided in paragraph 13.15.

13.20 When an existing transport document or cargo handling form cannot be used for the purposes of dangerous goods documentation for international transport, the use of a document of the form shown in figure 13.1 is considered advisable.

Figure 13.1

DANGEROUS GOODS DECLARATION

Shipper (Name and Address)	Reference number (s) Annex I (Recommended layout)
(Reserved for text, instructions or other matter)	Name of carrier (or his agent)
Name/means of transport / Port/place of departure	(Reserved for text, instructions or other matter)
Port/place of destination	

Marks and numbers; Number and kind of packages; Description of goods*	Gross weight (kg) Net quantity (when required)
INDICATE: HAZARD CLASS/DIV.; UN NUMBER; FLASHPOINT (in °C) (when required)	

* Correct TECHNICAL NAME: proprietary names alone are not sufficient

Additional information

Special information is required for (a) dangerous goods in limited quantities, and (b) radioactive substances (Class 7). In certain circumstances, (c) a weathering certificate, or (d) a Container/Trailer Packing Certificate is required.

DECLARATION	Name/status of signatory Place and date Signature on behalf of shipper

Placarding

13.21 Enlarged United Nations danger labels should be affixed to the exterior surfaces of transport units to provide a warning that the contents of the unit are dangerous goods and present risks.

These enlarged labels are referred to as placards.

13.22 Transport units comprise road transport tank and freight vehicles, railway transport tank and freight vehicles, and multimodal tank and freight containers.

13.23 Transport units carrying dangerous goods or the residue of dangerous goods in unpurged tanks should display placards so as to be clearly visible on at least two opposing sides of the unit and in any case in such a position as may be seen by all those involved in the loading or unloading process. Where the transport unit has a multiple compartment tank which is carrying more than one dangerous good and/or the residue of a dangerous good, appropriate placards should be displayed along each side at the position of the relevant compartment.

13.24 Placards should

(a) be not less than 25 cm by 25 cm;

(b) correspond to the label for the danger class of the dangerous goods in question with respect to colour and symbol;

(c) display the class and division number in digits 25 mm high in the bottom corner as required for the labels.

13.25 Consignments of

(a) solids, liquids or gases transported in tank transport units;

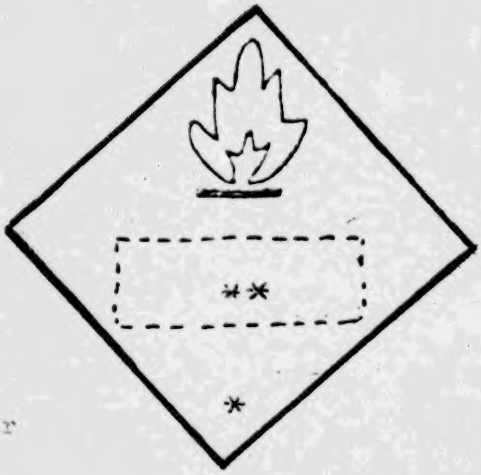
(b) packaged dangerous goods of a single commodity which constitute a full load for the transport unit; and

(c) any quantity of such dangerous goods as it may be specified in the list should have the serial number for the goods displayed in black digits not less than 65 mm high either

- against a white background in the lower half of the placard (see figure 13.2), or

- on an orange rectangular panel not less than 12 cm high and 30 cm wide, with a 1 cm black border, to be placed immediately adjacent to the placard (see figure 13.3).

13.26 Subsidiary risks need not be signalled by subsidiary placards unless so specified in the list.



** location of serial number

* location of class and division number

** emplacement du numéro de série

* emplacement du numéro de la classe et de la division

FIGURE 13.2

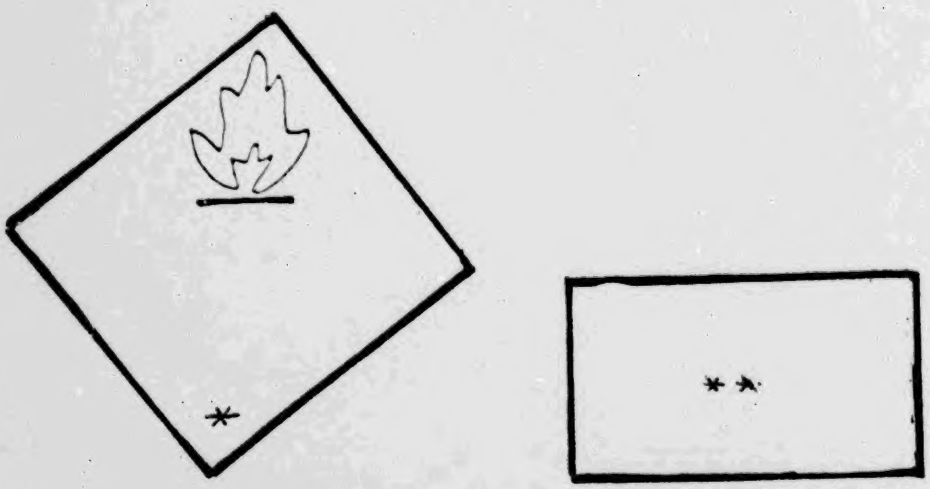


FIGURE 13.3

Annex 12

Appendix 1

PROPER SHIPPING NAME

The purpose for indicating the proper shipping name of the article or substance being transported on the documentation accompanying a consignment, and for marking this name on the package containing the good, is to ensure that the article or substance can be readily identified during transport. This ready identification is particularly important in the case of a spill or leak of a dangerous good in order to determine what response actions, emergency equipment, or, in the case of poisons, antidotes, are necessary to properly deal with the situation.

The proper shipping name is considered to be that portion of the entry most accurately describing the good in the list of dangerous goods (or in the index) which is shown in capital letters. Practical considerations prohibit the listing of all dangerous goods by name in these recommendations. Therefore, many dangerous goods must be transported under one of the generic (i.e. not otherwise specified (n.o.s.)) proper shipping names which appear in the list or index of dangerous goods. Due to the highly generic nature of certain of these proper shipping names, neither the entry itself nor its corresponding serial number, can provide sufficient information about the dangerous good to ensure that appropriate response action is initiated in the event of an incident involving the material. For this reason it is considered necessary, for the purpose of documentation and marking of packages, that these "n.o.s." descriptions be supplemented with the technical name of the material. The technical name should be shown in parenthesis immediately following the proper shipping name. The particular entries in the dangerous goods list for which this supplemental information is considered necessary are:

DESCRIPTION	UN NUMBER
Explosives, n.o.s.	0349-0359
Refrigerant gases, n.o.s.	1078
Inflammable solids, n.o.s.	1325
Pyrophoric liquid, n.o.s.	1375
Pyrophoric metals and alloys, n.o.s.	1383
Oxidizing substances, n.o.s.	1479
Dyes and dye intermediates, toxic, n.o.s.	1602
Tear gas substances, liquid or solid, n.o.s.	1693
Corrosive liquids, n.o.s.	1760
Insecticide gases, toxic, n.o.s.	1967
Insecticide gases, nontoxic, n.o.s.	1968
Alcohols, toxic, n.o.s.	1986

DESCRIPTION	UN NUMBER
Inflammable liquids, toxic, n.o.s.	1992
Inflammable liquids, nontoxic, n.o.s.	1993
Solvents, inflammable, toxic, n.o.s.	1997
Solvents, inflammable, nontoxic, n.o.s.	1998
Organic peroxides, n.o.s.	2255
Dyes and dye intermediates, corrosive, n.o.s.	2801
Poisonous (toxic) liquids non-inflammables, n.o.s.	2810
Poisonous (toxic) solids, n.o.s.	2811
Substances which on contact with water emit inflammable gases, n.o.s.	2813
Infectious substances, n.o.s.	2814
Pyrophoric solids, n.o.s.	2845

The technical name shown should be a recognized chemical name currently used in scientific and technical handbooks, journals and texts. Trade names should not be used. It is recognized that when a mixture of dangerous goods is described by one of the "n.o.s." entries listed above, the inclusion in parenthesis of the technical name of each constituent that contributes to the hazard of the mixture may result in such a lengthy description that marking the entire description on the package becomes impractical. In general, not more than the two constituents which most predominantly contribute to the hazard or hazards of a mixture need be shown. If a package containing a mixture is labelled with any subsidiary labels, one of the two technical names shown in the parenthesis should be the name of the constituent which compels the use of the subsidiary label.

Care should be exercised in the selection of the portion of the entry in the list of dangerous goods, or in the index, which constitutes the "Proper Shipping Name" of the dangerous goods. Portions of an entry not highlighted by capital letters need not be considered as part of the proper shipping name. In addition, when conjunctions such as "and" or "or" are not capitalized or when capitalized segments of an entry are punctuated by commas, the entire capitalized portion of the entry need not necessarily be shown as the proper shipping name on documentation or package markings. This is the case, particularly when a combination of several distinct entries are listed under a single serial number. Examples illustrating selection of the proper shipping name for such entries are:

(1) UN 1011 Butane or Butane mixtures

The proper shipping name is the most appropriate of the following possible combinations:

Butane
Butane mixtures

(2) UN 2583 Alkyl, Aryl and Toluene sulphonic acids, solids, containing more than 5 per cent of free sulphuric acid.

The proper shipping name is the most appropriate of the following possible combinations:

Alkyl sulphonic acid, solid
Aryl sulphonic acid, solid
Toluene sulphonic acid, solid

(3) UN 1373 Fibres or Fabrics, Animal or Vegetable, with animal or vegetable oil, n.o.s.

The proper shipping name is the most appropriate of the following possible combinations:

Fibres, animal, n.o.s.
Fibres, vegetable, n.o.s.
Fabrics, animal, n.o.s.
Fabrics, vegetable, n.o.s.

Proper shipping names may appear in the singular or plural as appropriate. In addition, when qualifying words are used as part of the proper shipping name (as in example 3 above), their sequence on package markings or documentation is optional. For instance, "Fibres, animal, n.o.s." may optionally be shown "Animal fibres, n.o.s.".